

Amendments to the Specification:

Please replace the title of the invention with the following rewritten title:

-- Mirror Array Device And Projection Type Display Apparatus Using The Same Projection Type Display Apparatus. --

Please replace the paragraph beginning at page 9, line 25, with the following rewritten paragraph:

-- Fig. 1 is a view showing the system configuration of a projection type display apparatus according to the embodiment of the present invention;

Fig. 2A is a sectional view for explaining the operation principle of reflected light color separation and reflection angle modulation in an AMA (Actuated Mirror Array) of the present invention;

Fig. 2B is a sectional view of an echelon grating on a pixel mirror;

Fig. 2C is a sectional view showing the structure of an AMA of the present invention where a pixel mirror is not tilted.

Fig. 3 is a sectional view showing the structure of a thin-film AMA;

Fig. 4 is a graph showing the correlation between the AMA pixel mirror tilt angle and the brightness of a projected image;

Fig. 5 is a graph showing the correlation between the pixel mirror tilt angle and the pixel drive voltage of the AMA pixel mirror; and

Fig. 6 is a graph showing the correlation between the brightness of a projected image and the pixel drive voltage of the AMA pixel mirror. --

Please replace the paragraph beginning at page 11, line 7, with the following rewritten paragraph:

-- In the thin-film AMA 3 used here, each pixel mirror 35 has on its surface a reflecting diffraction grating 36 formed by patterning using photolithography and deposition of a reflecting film, as shown in the enlarged view of Fig. 2A and Fig. 2C. For this diffraction grating 36, the lattice constant is 790 nm, the step difference in the grating is 135 nm, and the surface is an Al-deposited surface. For the pattern of the grating, the diffracted light distribution direction

(i.e., the direction in which a diffraction grating has a staircase shape) β and the tilt drive direction of the mirror 35 are in the same plane, and here, in the drawing surface. That is, since the diffraction grating has a staircase shape in the surface (sheet surface) perpendicular to the rotational axis in tilting the thin-film AMA 3, diffracted light is separated in this drawing surface. Hence, the diffracted light components can be deflected in the separation direction of the R, G, and B diffracted light components by tilting the mirror 35. --

Please replace the paragraph beginning at page 13, line 1, with the following rewritten paragraph:

-- ON/OFF of the projected image is determined depending on whether a reflected light beam from each pixel enters the entrance aperture 10 of the projecting optical system 4, i.e., an aperture or the aperture of a member corresponding to an aperture. If the light beam is partially captured by the aperture, the gray level display of an image is determined by the degree of capture of each color light component. --

Please replace the paragraph beginning at page 13, line 14 , with the following rewritten paragraph:

-- White light containing R, G, and B color light components is emitted from the white illumination unit 1 as a divergent light beam, condensed by a collimator lens 20, and reaches a concave mirror 21. The light beam is condensed and reflected by the mirror 21 to illuminate the AMA 3 while converging, as shown in Fig. 1. The incident angle of the illumination optical axis with respect to the center of the AMA 3 is set to 20°. When each pixel mirror in the AMA 3 is in a predetermined still state, reflected light from the AMA 3 is affected by the function of the diffraction grating of each pixel mirror. For this reason, the respective color components are reflected at different angles, as shown in Fig. 1 and separated. At the entrance aperture 10 of the optical system 4, the reflected diffracted light components of R, G, and B are separated. The focal point of each of the R, G, and B light components separated by the concave mirror 21 can be either in front of or behind the entrance aperture. To obtain the gray level of each color, each condensing point is set at a position separated from the entrance aperture 10 to some extent such that the light beam has a predetermined size near the entrance aperture 10. --

Please replace the paragraph beginning at page 15, line 8, with the following rewritten paragraph:

-- Hence, when each pixel mirror 35 tilts (the direction of tilt matches the RGB light beam separation direction in Fig. 2A), the mirror tilt angle and the amount of the each exit light component from the projecting optical system 4 after passing through the entrance aperture 10, i.e., the brightness of the projected image have a relationship shown in Fig. 4. That is, as the mirror tilt angle changes from the negative direction (when a negative voltage is applied to the pixel mirror actuator) to the positive direction (when a positive voltage is applied to the pixel mirror actuator), a B light component gradually exits and switches to a G light component and then to an R light component. At the maximum tilt angle, all light components fall outside the aperture, and a state wherein no light exits (black display) can be obtained. The state wherein no light exits (black display) or little light exits can be obtained even at a tilt angle of 0°, i.e., even when no voltage is applied. --